

Appl. No. 09/865,238
Amdt. dated June 22, 2005
Reply to Office action of March 29, 2005

REMARKS

Based on the above amendment and the following remarks, applicants respectfully submit that all the pending claims are in condition for allowance.

Claim Status

Claims 1-23 remain pending.

Objections to the Specification

The examiner objected to a typographical error in paragraph 0030. This error is corrected by applicants' amendments.

The examiner objected to the specification as referencing a missing element 302 in Fig. 3. Element 302 appears in the set of originally filed drawings, but applicants inadvertently relied on a slightly revised drawing set in having the formal drawings prepared. In the revised drawing set, element 302 has been subsumed by element 304. Applicants believe the revised Fig. 3 is easier to understand, and accordingly applicants herein amend the specification to be consistent with the drawings rather than vice versa. No new matter is added by these amendments.

Rejections under 35 USC § 103

Claims 1-4, 6, 8-9, 11-13, 16, and 18-22 stand rejected under 35 USC § 103(a) as being unpatentable over "Applicant's admitted prior art" (hereafter "conventional OFDM") in view of U.S. Patent No. 5,748,677 ("Kumar"). Claims 5, 15, and 23 stand rejected under 35 USC § 103(a) as being unpatentable over conventional OFDM in view of Kumar. Claims 7 and 17 stand rejected under 35 USC § 103(a) as being unpatentable over conventional OFDM in view of Kumar and further in view of U.S. Patent No. 6,452,981 ("Raleigh").

Applicants respectfully traverse these rejections. The standard for a rejection under 35 USC 103 is prima facie obviousness, which requires, *inter alia*, that the cited reference must teach or suggest all the claim limitations.

Independent claim 1 recites "a detection module configured to determine a channel symbol from the [frequency component] amplitudes while accounting for correlation between the

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amplitudes". Independent claim 19 recites a similar limitation. The examiner cites Kumar as teaching a detection module that accounts for correlation. However, the correlation addressed by Kumar is only between time domain amplitudes, not between frequency component amplitudes as required by the claim. See, e.g., Kumar 2:36-40 ("In mobile communication systems, the 'coherence interval' is a characteristic of the RF propagation channel that describes the length of time over which the effects of multipath delay are strongly correlated."). Even Kumar's so-called "process of correlation" for spread spectrum signaling relates only to time-based correlation and not correlation between frequency component amplitudes as required by the claim. Accordingly, Kumar fails to teach or suggest this limitation of claims 1 and 19.

This limitation is also absent from conventional OFDM and is not taught or suggested by Raleigh. Raleigh apparently teaches spatial processing of multiple receive signals, but fails to teach or suggest accounting for correlation between frequency component amplitudes of a single receive signal as required by the claims. See, e.g., Raleigh 14:54-15:6 (suggesting that frequency component bins are independent). Independent claims 1 and 19, and their respective dependent claims 2-10 and 20-23, are allowable over the cited art at least because the cited art fails to teach or suggest this limitation.

Independent claim 11 recites "determining a channel symbol associated with the set of frequency component amplitudes while accounting for correlation between the amplitudes". As argued above, the cited art fails to teach or suggest accounting for correlation between frequency component amplitudes of a receive signal. For at least this reason, independent claim 11 and its dependent claims 12-18 are allowable over the cited art.

Allowable Subject Matter

Claims 10 and 14 are objected to as being dependent on rejected base claims. Applicants wish to defer amending these claims pending the prosecution outcome of the base claims.

Conclusion

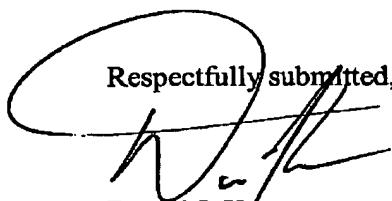
In the course of the foregoing discussions, applicant may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or

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dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769/1789-04801/HDJK.

Respectfully submitted,



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